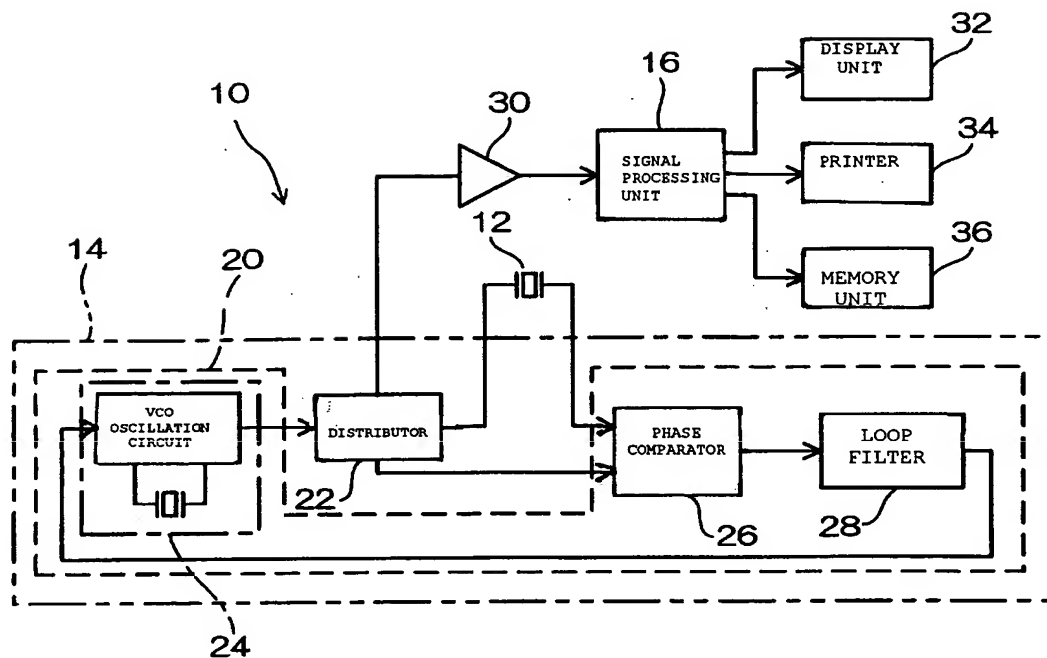




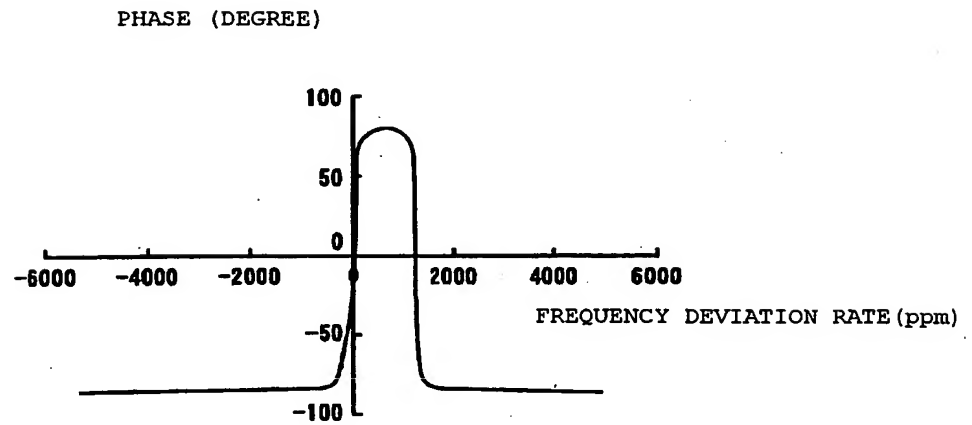
FIG. 1



- 10: MASS MEASUREMENT APPARATUS
- 12: PIEZOELECTRIC VIBRATION REED FOR MASS MEASUREMENT
- 14: EXCITATION CIRCUIT
- 16: SIGNAL PROCESSING UNIT
- 20: PLL CIRCUIT
- 24: PRESSURE CONTROLLED OSCILLATOR

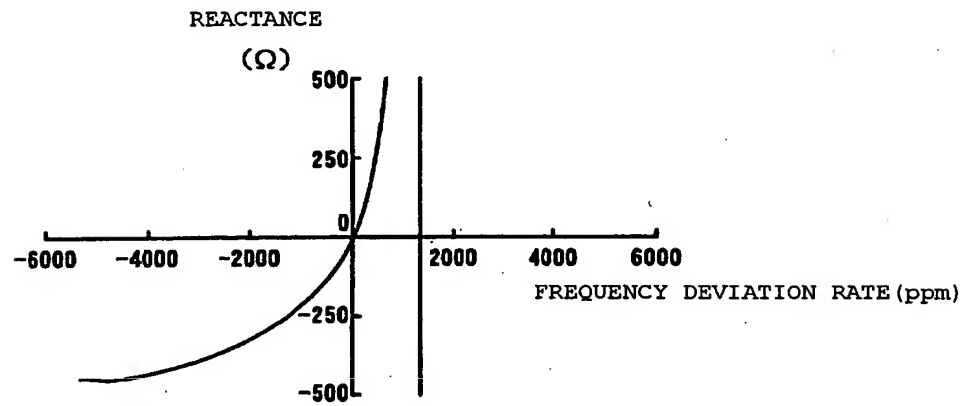
2/15

FIG. 2



3/15

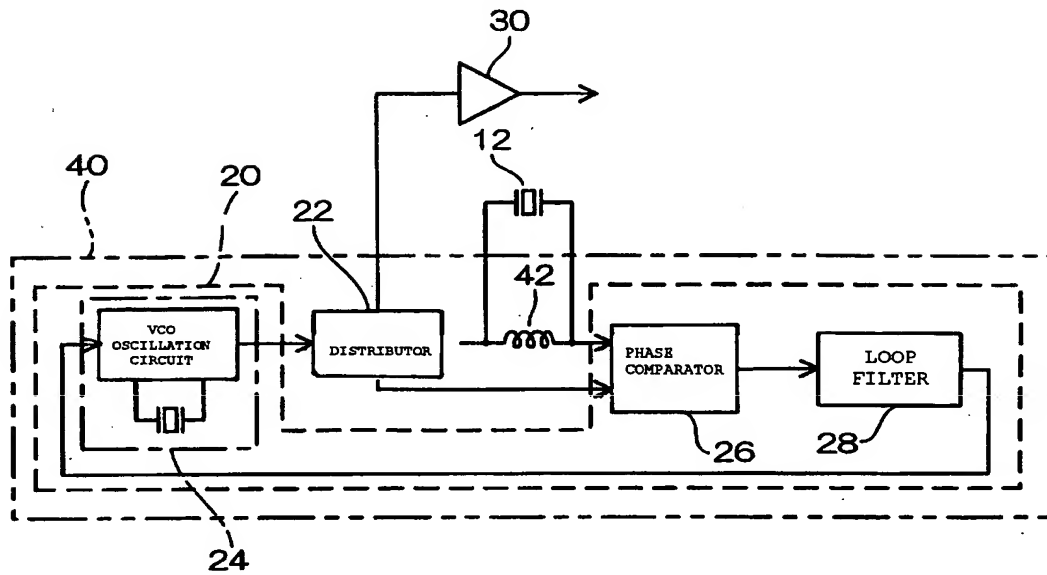
FIG. 3



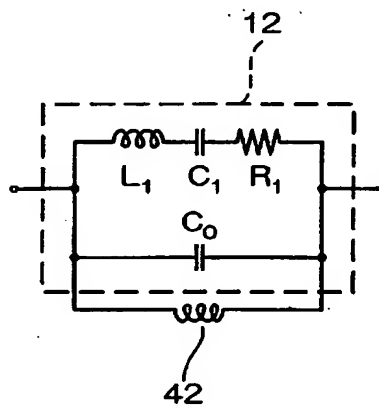
4/15

FIG. 4

(1)



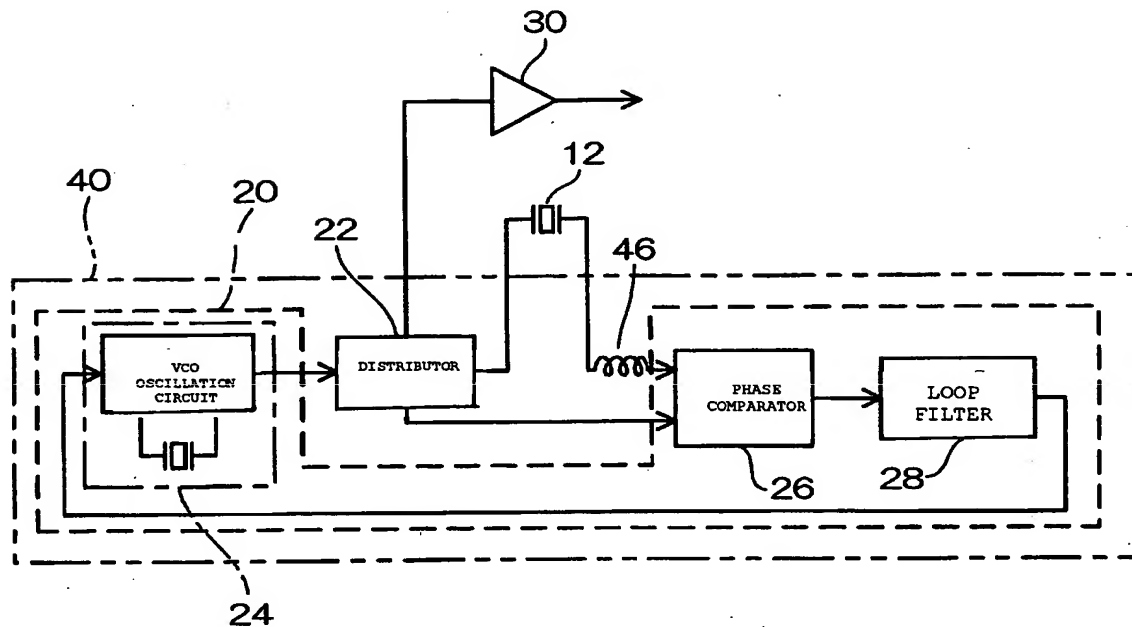
(2)



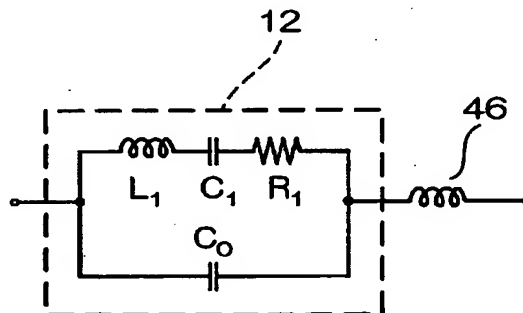
5/15

FIG. 5

(1)

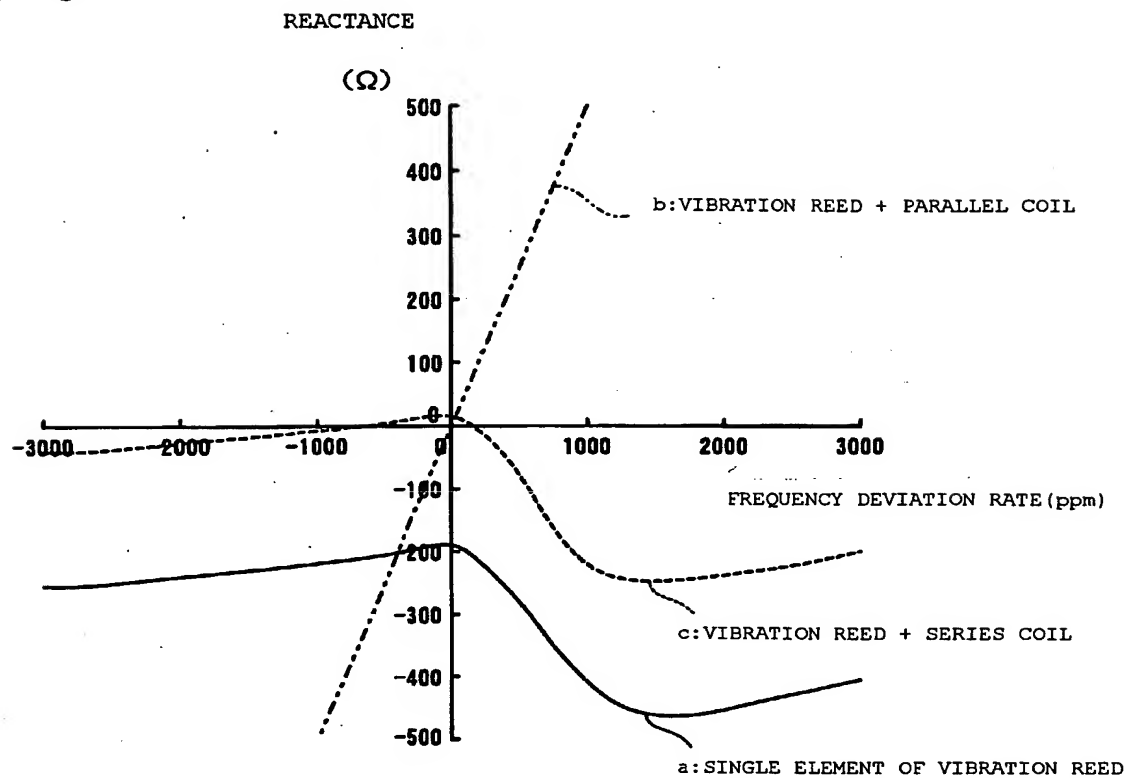


(2)



6/15

FIG. 6



7/15

FIG. 7

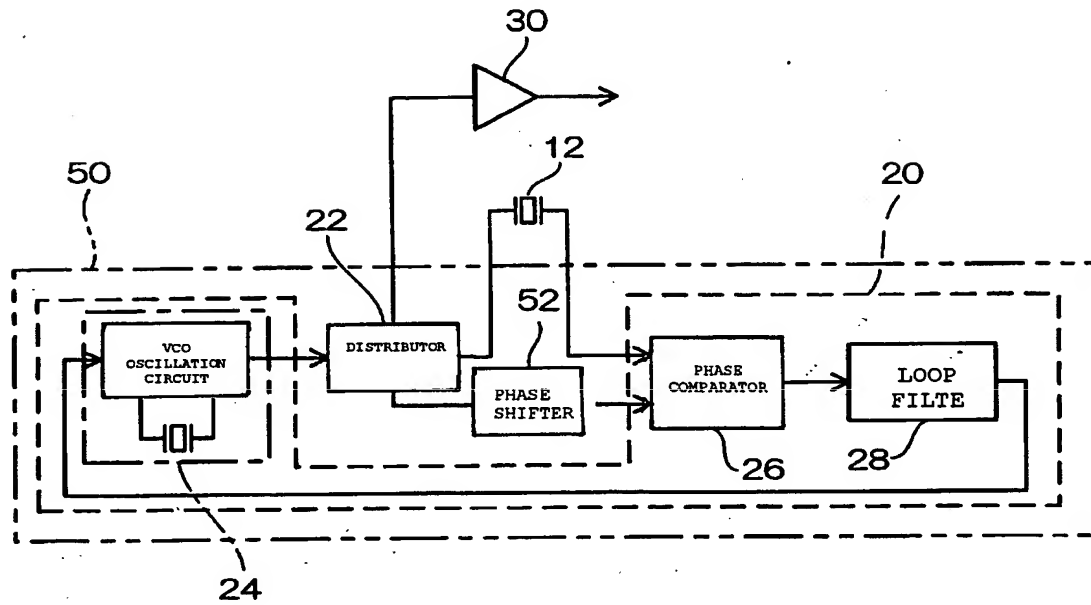


FIG. 8

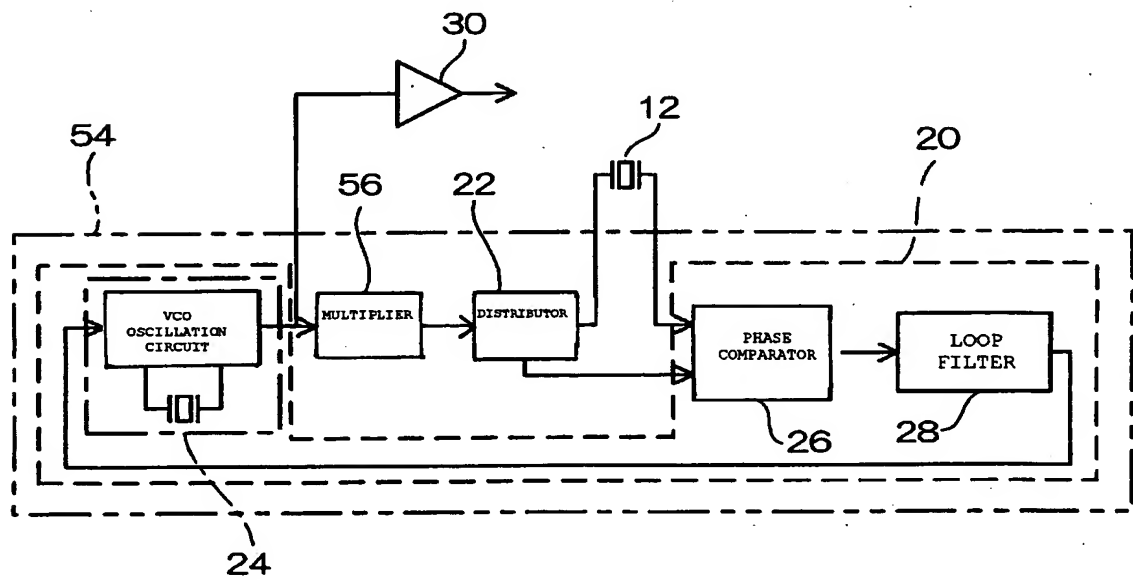
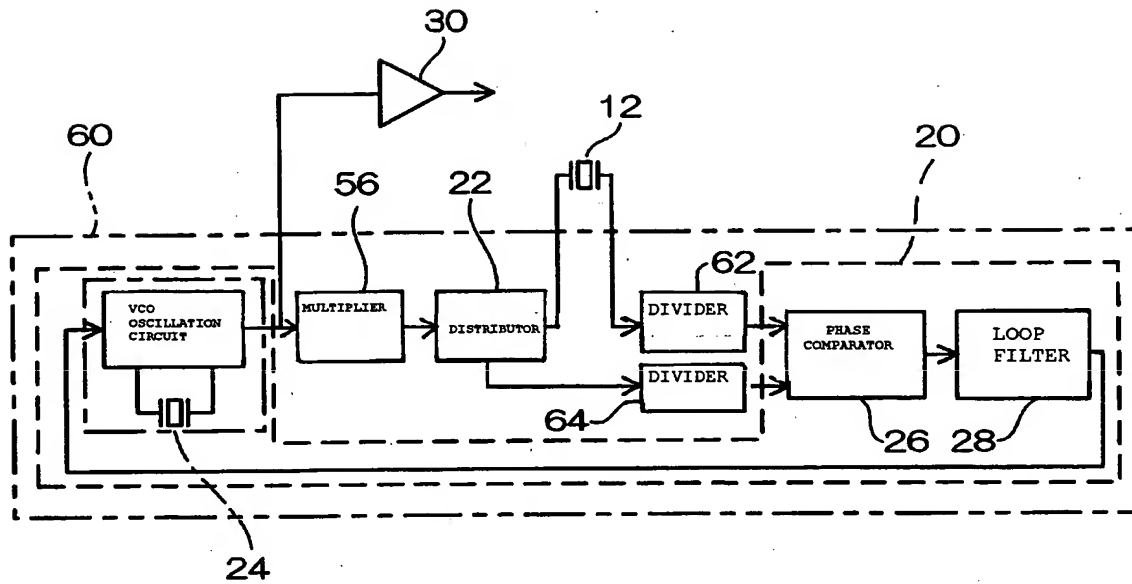


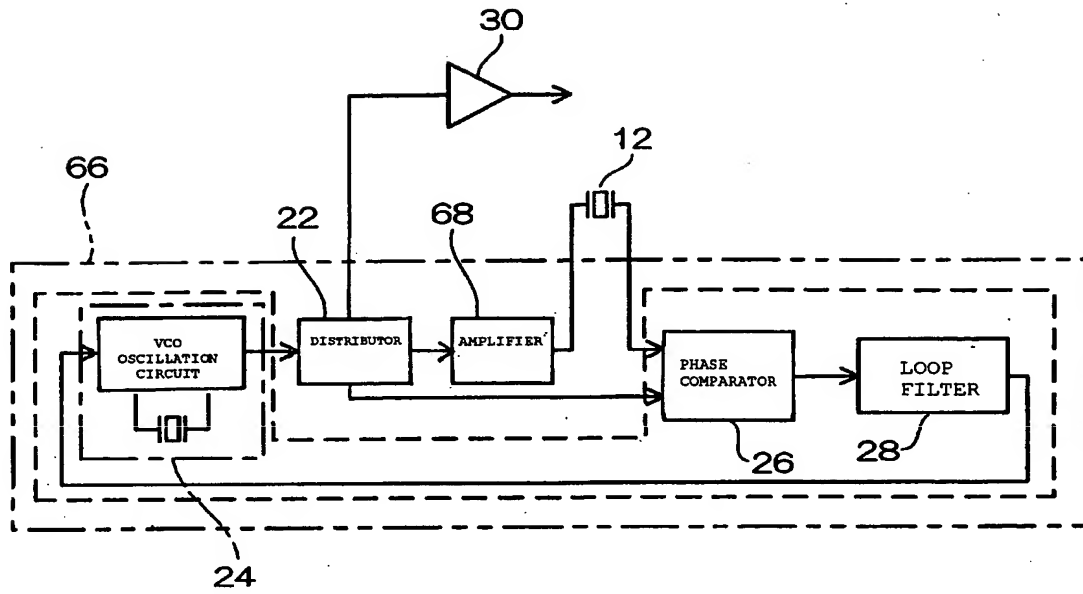
FIG. 9





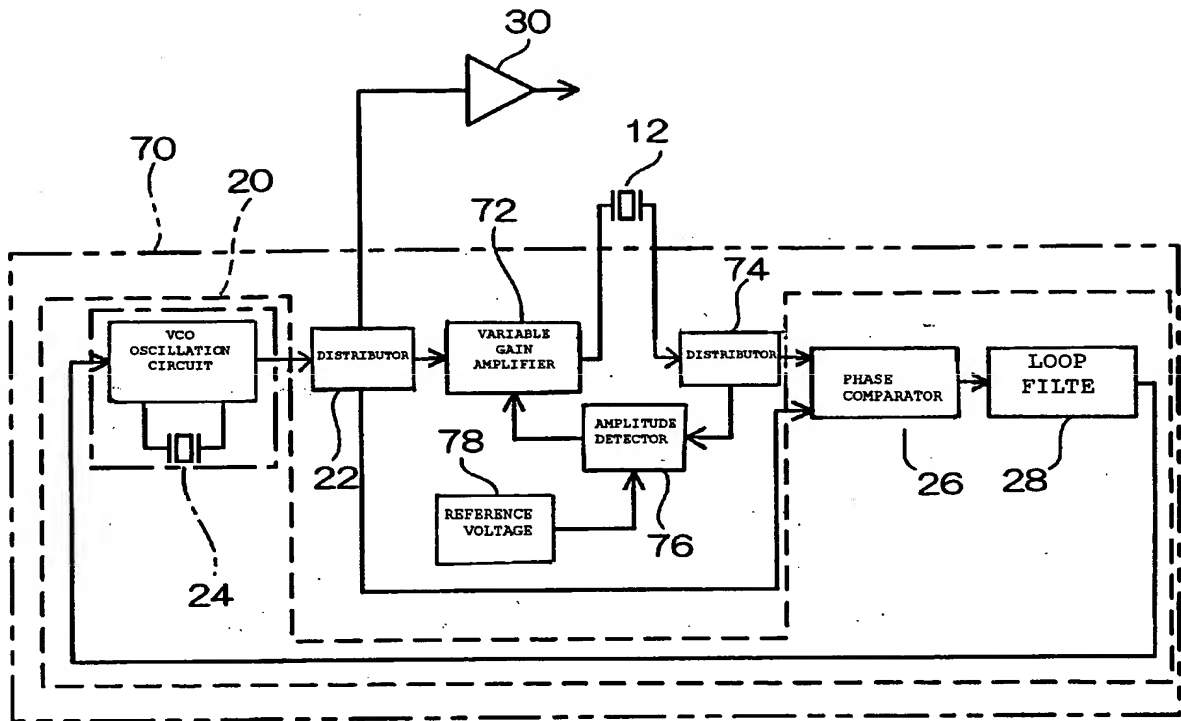
9/15

FIG. 10



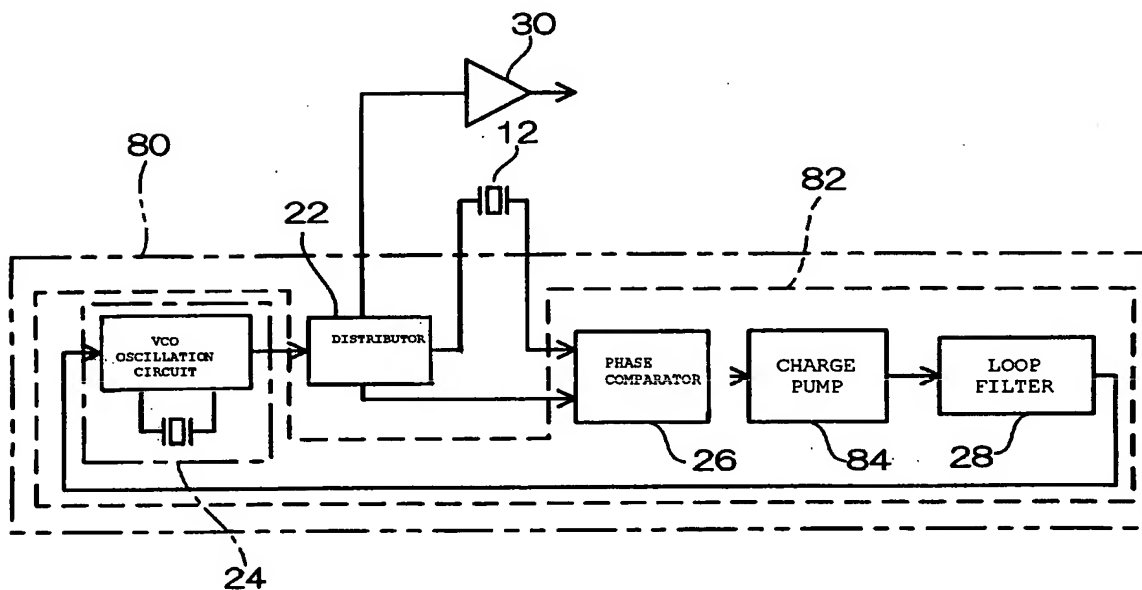
10/15

FIG. 11



11/15

FIG. 12



12/15

FIG. 13

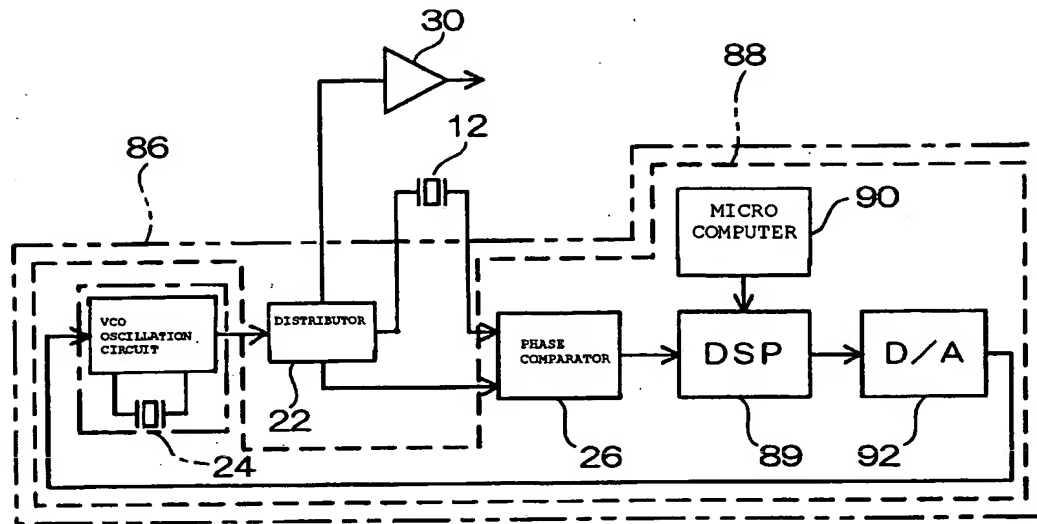
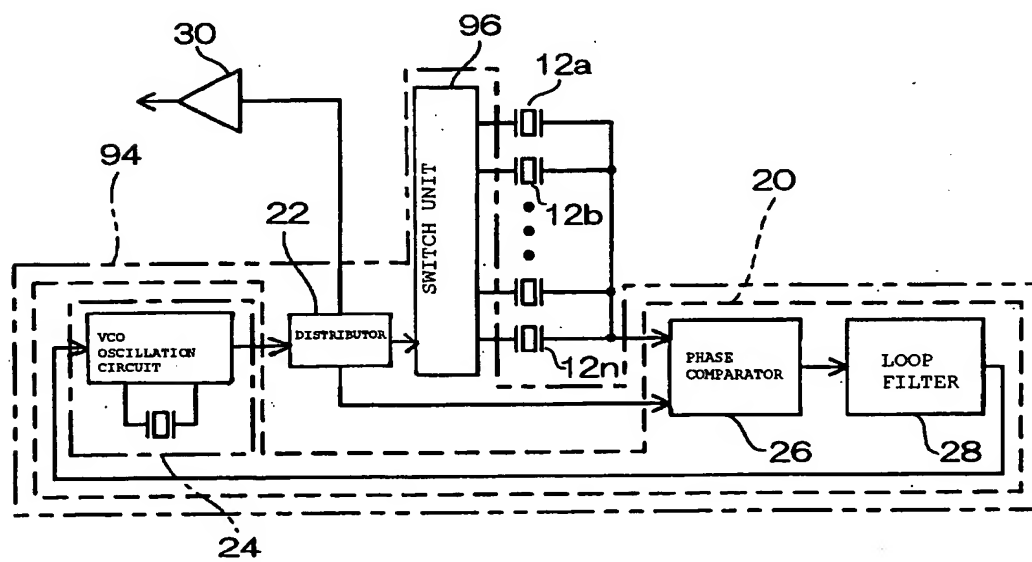


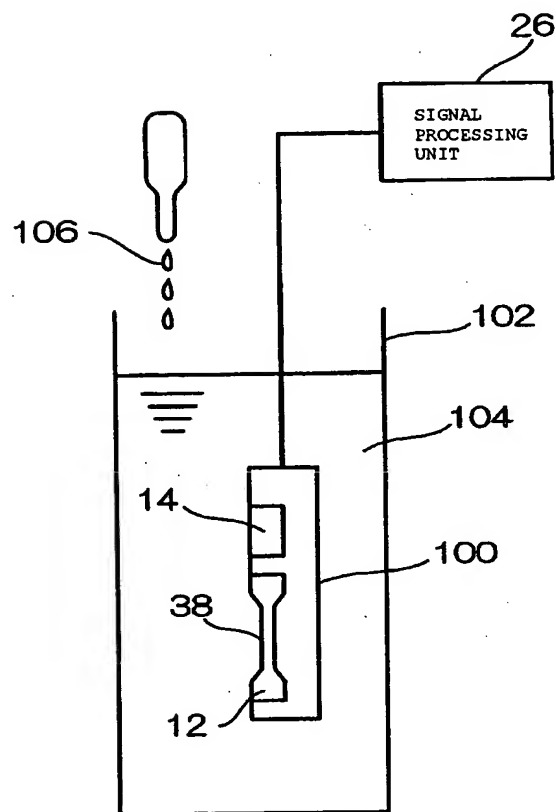
FIG. 14



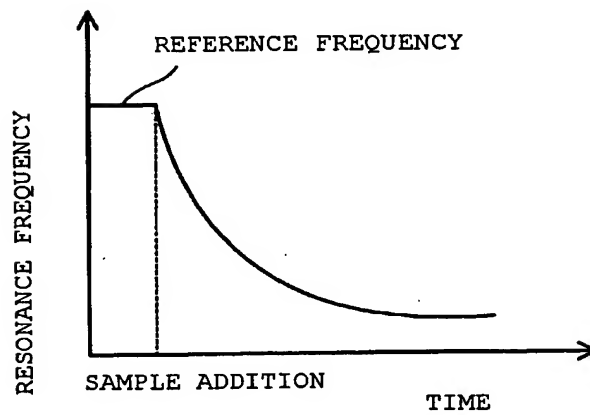
13/15

FIG. 15

(1)

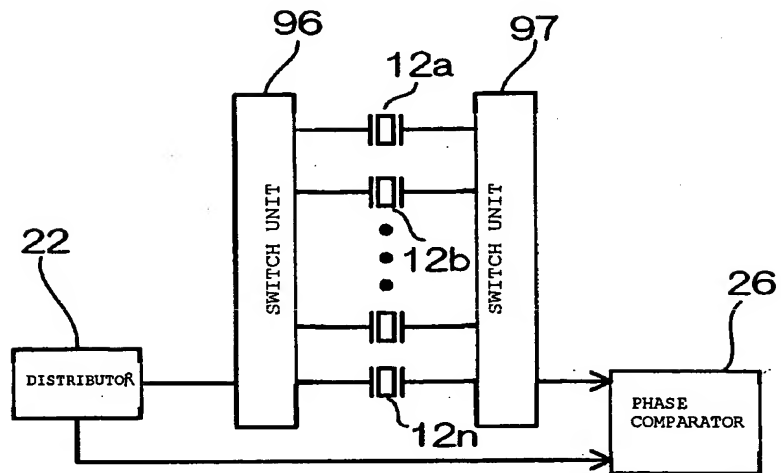


(2)



14/15

FIG. 16



15/15

FIG. 17

